

Office Action Summary

Application No.

09/900,978

Applicant(s)

AOKI, MAKOTO

Examiner

Regina Liang

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-17 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2.4</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tajima et al (US. PAT. NO. 6,249,265 hereinafter Tajima).

As to claim 1, Tajima discloses a display device comprising a frame displaying one picture is time-divided into multiple sub-frames, an adjustment unit independently controls a brightness of the subsequent sub-frame. Tajima does not disclose the brightness of the subsequent sub-frame is attenuated at a designated ratio. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device of Tajima to attenuate the brightness of the subsequent sub-frame at a designated ratio, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

2. Claims 2-17 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter: none of prior art teaches or suggest a display device comprising an attenuation signal generating means for generating an attenuation signal by dividing an inputted luminosity signal by a designated attenuation coefficient, and a signal switching means for inputting the luminosity signal before division to the antecedent sub-frame in the relevant frame, and inputting the attenuation signal after division to the subsequent sub-frame in the relevant frame as claimed in independent claims 2-9.

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Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McKnight (US. PAT. NO. 6,243,072) teaches a method and apparatus for displaying grayscale or color images from binary images.

Nagaoka et al (US. PAT. NO. 5,874,932) teaches a picture of a frame is displayed on a display device by combining a plurality of subframes having different degrees of brightness.

Shinoda (US. PAT. NO. 5,724,054) teaches a method and a circuit for gradationally driving a flat display device.


Yamamoto et al (US. PUB. No. 2001/0048420) teaches a display apparatus including optical modulation element.

Ikedo (US. PUB. No. 2001/0052886) teaches a LCD apparatus and driving method.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


REGINA LIANG
PRIMARY EXAMINER
ART UNIT 2674

RL 2/4/04